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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,862	04/20/2001	Tarek Abd Elazim Ramadan	A32562-070050.1370	1418

7590 08/24/2005
BAKER BOTTS L.L.P
44TH FLOOR
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112-4498

EXAMINER

RAHLL, JERRY T

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,862

Applicant(s)

RAMADAN, TAREK ABD ELAZIM

Examiner

Jerry T. Rahli

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/25/01; 8/10/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.
2. The oath or declaration is defective because it lists priority to provisional application 06/156,210. This is incorrect. Also, the examiner notes that a reference to any prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e) or 120. See 37 CFR 1.78(a).

Drawings

3. The drawings submitted 10 August 2005 have been reviewed and determined to facilitate understanding of the invention. The drawings are accepted as submitted.

Information Disclosure Statement

4. The information disclosure statements (IDS's) submitted on 25 July 2001 and 10 August 2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.
5. However, the information disclosure statements fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the lined-through information referred to therein has not been considered (note attached copies).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-20 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by “A Novel 1x4 Coupler-Multiplexer Permutation Switch for WDM Applications” by Ramadan et al.

8. Ramadan et al describes a permutation switch for switching wavelength-division multiplexed signals received from one or more optical waveguides, comprising a substrate having at least one surface (See Figure 1) and a single-mode to multi-mode backward coupler, coupled to said surface of said substrate, for receiving single-mode wavelength division multiplexed signals from said optical waveguides, and for backward coupling said signals into a plurality of single-mode signals, each having its own unique mode (see Figure 1)

9. Ramadan et al. further describes a receiving layer, coupled to said substrate surface, for receiving said single-mode wavelength-division multiplexed signals, a separation layer having a first surface and a second surface, with the first surface coupled to said receiving layer, for permitting said backward coupling between said single-mode wavelength-division multiplexed signal and said plurality of single-mode signals and a multi-mode waveguide, coupled to said second surface of said separation layer, for receiving said backward coupled plurality of single-mode signals (see Figure 1).

10. Ramadan et al. further describes the separation layer further comprises a grating portion etched into said second surface of said separation layer, for phase-matching a channel of the

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wavelength-division multiplexed signal to one of said plurality of single-mode signals (see Figure 1).

11. Ramadan et al. further describes the signals comprising asynchronous signals (see Page 582).

12. Ramadan et al. further describes the separation layer is adapted to minimize modal-field overlap (see Pages 579-580).

13. Ramadan et al. further describes the single-mode to multi-mode backward coupler further comprises a plurality of output waveguides, each coupled to the multi-mode waveguide and receiving one of the plurality of single-mode signals (see Figure 1).

14. Ramadan et al. further describes the plurality of output waveguides as distributed adiabatically (see Page 582).

15. Ramadan et al. further describes the said receiving layer further includes an inverted rib portion having a predetermined width for propagating the single-mode wavelength division multiplexed signals (see Figure 1).

16. Ramadan et al. further describes the multi-mode waveguide further includes a rib portion having a predetermined width, and wherein the predetermined width of the inverted rib of the receiving layer is less than said predetermined width of the rib of said multi-mode waveguide (see Figure 1).

17. Ramadan et al. further describes the inverted rib portion of said receiving layer is offset from said rib portion of said multi-mode waveguide (see Figure 1).

18. Ramadan et al. further describes the inverted rib portion of said receiving layer aligned with an edge of said rib portion of said multi-mode waveguide (see Figure 1 and Page 580).

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19. Ramadan et al. further describes each of said output waveguides further includes a multiple-quantum well layer (see Page 579).
20. Ramadan et al. further describes the multiple quantum well layer comprises InGaAsP/InP (see Figure 1).
21. Ramadan et al. further describes a plurality of tapered electrodes, each one mounted on one of said plurality of output waveguides (see figure 1).
22. Ramadan et al. further describes the output waveguides sized to be much smaller than corresponding absorption lengths (see Page 582).
23. Ramadan et al. further describes the multi-mode layer adapted to receive all of the backward-coupled signals in sequential modes (see Pages 580-581).
24. Ramadan et al. further describes the multi-mode layer adapted to receive all of the backward-coupled signals in even-ordered modes (see Pages 580-581).

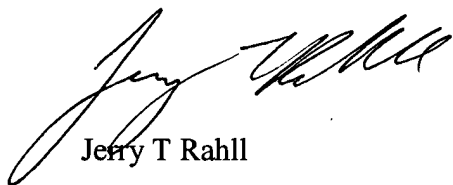
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry T. Rahlh whose telephone number is (571) 272-2356. The examiner can normally be reached on M-Th (8:30-5:30).

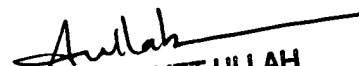
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jerry T Rahll



AKM ENAYET ULLAH
PRIMARY EXAMINER